

# Why Are Babies Like Hinges ?

Simplify each expression below and find your answer in the set of answers to the right of that exercise. Write the letter of your answer in the box that contains the number of that exercise.

①  $\frac{n^9}{n^5}$

③  $\frac{2n^4}{n}$

Ⓐ  $2n^6$

Ⓔ  $2n^3$

②  $\frac{n^{12}}{n^3}$

④  $\frac{6n^2}{3n^5}$

Ⓗ  $n^9$

Ⓙ  $n^4$

Ⓡ  $\frac{2}{n^6}$

Ⓨ  $\frac{2}{n^3}$

⑤  $\frac{x^3y^4}{x^2y}$

⑦  $\frac{8xy^2}{12x^3y^5}$

Ⓡ  $-4x^3$

Ⓐ  $xy^3$

⑥  $\frac{-8x^6y^2}{2x^3y^2}$

⑧  $\frac{20x^3y^8}{-5x^3y}$

Ⓢ  $-4y^4$

Ⓙ  $-4y^7$

Ⓔ  $\frac{2}{3x^2y^3}$

Ⓨ  $\frac{2}{3xy^4}$

⑨  $\frac{3a^5b^2}{9a^2b^5}$

⑪  $\frac{-24a^2b}{18ab^5}$

Ⓘ  $5ab^8$

Ⓐ  $15a^2$

⑩  $\frac{-15a^2b^9}{-3ab}$

⑫  $\frac{30a^9b^2}{2a^6b^2}$

Ⓛ  $5ab^6$

Ⓒ  $15a^3$

Ⓝ  $-\frac{4a}{3b^4}$

Ⓗ  $\frac{a^3}{3b^3}$

⑬  $\frac{8u^4v^{10}}{-2u^2v^8}$

⑮  $\frac{-7u^2v^6}{uv^3}$

Ⓑ  $-7uv^5$

Ⓢ  $-4u^2v^2$

⑭  $\frac{13u^7v^7}{26u^7v}$

⑯  $\frac{-9u^8v^2}{-6u^2v^6}$

Ⓞ  $-7uv^3$

Ⓔ  $-4u^7v^2$

Ⓙ  $\frac{v^6}{2}$

Ⓐ  $\frac{3u^6}{2v^4}$

⑰  $\frac{14k^9m^3}{2km^3}$

⑲  $\frac{-3k^5m^6}{k^4m^3}$

Ⓔ  $-3k$

Ⓛ  $7k^6m$

⑱  $\frac{4k^2m^2}{16k^5m^3}$

⑳  $\frac{12km^3}{-4m^3}$

Ⓓ  $7k^8$

Ⓡ  $-3km^3$

Ⓞ  $\frac{1}{4k^3m}$

Ⓝ  $\frac{1}{4km^2}$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----

Name \_\_\_\_\_

Polynomials

## Dividing Exponents

**Rule:**  $\frac{x^a}{x^b} = x^{a-b}$

**Example:**  $\frac{x^6}{x^4} = x^{6-4} = x^2$

$\frac{x^3}{x^{-2}} = x^{3-(-2)} = x^5$

Divide the following polynomials.

1.  $\frac{x^3}{x}$

11.  $\frac{18c^3}{-3c^2}$

2.  $\frac{9a^3b^6}{-3ab^2}$

12.  $\frac{-48c^2d^4}{-8cd}$

3.  $\frac{d^6}{d^3}$

13.  $\frac{22v^5z^8}{2yz^7}$

4.  $\frac{b^{14}c^9}{b^5c^4}$

14.  $\frac{28x^2y}{-4x^2}$

5.  $\frac{-12m^5}{6m}$

15.  $\frac{-3p^8}{6p^2}$

6.  $\frac{15k^7r^3}{-3k^5}$

16.  $\frac{42r^{13}}{-7r^8}$

7.  $\frac{9a^{13}}{a^3}$

17.  $\frac{(6x^3)(4x^9)}{-12x^{10}}$

8.  $\frac{(3xy)(4x^2y)}{-6xy^2}$

18.  $\frac{21k^9}{(3k)(7k^4)}$

9.  $\frac{-14c^{15}d^3}{-2c^9d}$

19.  $\frac{4x^2y^3z^4}{2xy^2z^3}$

10.  $\frac{(5k)(-8k^5)}{10k^3}$

20.  $\frac{(121c^3)(-c^8)}{11c^5}$